

Remarks

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are respectfully requested.

Claims 1-16 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claim 1 has been amended so as to address the rejection. As a result, withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

Claims 1-9, 11, 12 and 16 have been rejected under 35 U.S.C. §102(b) as being anticipated by Garrison (US 6,425,916). Claims 1-3, 11-13 and 16 have been rejected under 35 U.S.C. §102(e) as being anticipated by Vesely (US 6,530,952). Claims 1, 2, 4, 11-13 and 16 have been rejected under 35 U.S.C. §102(e) as being anticipated by Fogarty (U.S. 6,939,365). Claims 1, 2, 4-9, 11, 12 and 16 have been rejected under 35 U.S.C. §102(b) as being anticipated by Johnson (US 4,339,831).

Claim 1 has been amended so as to include the limitation from claim 5 and to further distinguish the present invention, as recited therein, from the references relied upon in the above-mentioned rejections. Support for the amendments to claim 1 can be found at least at page 5, lines 3-10 and 17-27, and Figures 1 and 3.

Further, claim 5 has been canceled without prejudice or disclaimer to the subject matter contained therein. New claims 17 and 18 have been added. It is noted that claim 18 include the limitations of previous claims 1, 10 and 14.

In light of the inclusion of the features of claim 5 into claim 1, it is apparent that the rejections of claim 1 based on Vesely and Forgarty are moot, since neither of these references were relied upon in the rejection of claim 5.

Claim 1 is patentable over Garrison and Johnson, since claim 1 recites, in part, integrated centripetal compression means for compressing a resilient carrier frame from a deployed position towards a folded position, wherein the integrated centripetal compression means comprises a clamp having at least two branches connected together at a common region, each branch having a connection segment connected to a flexible shutter and a drive segment for centripetally compressing the resilient carrier frame towards the folded position, and

wherein the common region is located at a distance from the connection segments of the branches, and the drive segments are located between the connection segments and the common

region, axially apart from the connection segments. Garrison and Johnson fail to disclose or suggest the integrated centripetal compression means as recited in claim 1.

Garrison discloses a cardiac valve 6 including a valve portion 38 supported by a number of posts 32, a support structure 26 made up of first and second elongated members 28 and 30 formed by windings 31 and separated by a temporary valve mechanism 40, and a coil 36 at the opposite end of the valve 6 from the valve portion 38. (See Figure 10). The rejection asserts that the struts of the first and second elongated members 28 and 30 correspond to the claimed branches of the clamp and the posts 32 correspond to the claimed drive segments of the branches. However, it is apparent that Garrison fails to disclose or suggest that the struts of the elongated members 28 and 30 each have a connection segment connected to a flexible shutter, wherein a common region, where the struts of the elongated members 28 and 30 are connected together, is located at a distance from the connection segments, and the posts 32 are located between the connection segments and the common region, axially apart from the connection segments. That is, the manner in which the struts of the elongated members 28 and 30 and the posts 32 of Garrison are being relied upon in the rejection necessarily prevents the valve 6 of Garrison from having drive segments located between connection segments and a common region, axially apart from the connection segments, as recited in claim 1. As a result, claim 1 is patentable over Garrison.

Johnson discloses a valve having three struts 10, 12 and 14, an edge 34 and a flexible membrane 30. The first ends of the struts 10, 12 and 14 are all connected at a joiner 16 and the second ends of the struts 10, 12 and 14 are connected to the edge 34 via suture pads 18, 20 and 22, respectively. The membrane 30 is attached to all points of the struts 10, 12 and 14 from the joiner 16 to the suture pads 18, 20 and 22. (See column 4, lines 61-63 and Figure 2).

In the rejection, the struts 10, 12 and 14 are relied upon as corresponding to the claimed branches and the portions of the struts 10, 12 and 14 near the joiner 16 are relied upon as corresponding to the claimed drive segments of the branches. However, since the struts 10, 12 and 14 of Johnson are attached to the membrane 30 at all points, even at the joiner 16, the total length of the struts 10, 12 and 14 must necessarily correspond to the connection segment recited in claim 1. Therefore, Johnson fails to disclose or suggest that the portion of the struts 10, 12 and 14 at the joiner 16 is located at a distance from the connection segments, and drive segments

are located between the connection segments and the joiner 16, axially apart from the connection segments. As a result, claim 1 is patentable over Johnson.

As for Vesely and Fogarty, it is apparent that these references also fail to disclose or suggest the above-discussed features of claim 1.

Further, claims 2-4 and 6-17 are patentable over Garrison, Vesely, Fogarty and Johnson based at least on their dependency from claim 1.

Claims 10, 14 and 15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Vesely. This rejection is respectfully traversed with respect to claim 18 for the following reasons.

Claim 18 is patentable over Vesely, since claim 18 recites, in part, a prosthetic valve including a resilient carrier frame that is radially deformable in an elastic manner relative and integrated centripetal compression means for compressing the resilient carrier frame, wherein the resilient carrier frame comprises a resilient wire mesh, and the integrated centripetal compression means comprises a constriction strand permanently engaged around the resilient wire mesh, and wherein the resilient wire mesh is a resilient tubular wire mesh, and the constriction strand extends around a circumference of the resilient tubular wire mesh. Vesely fails to disclose or suggest these features of claim 18.

Vesely discloses a collapsible valve 20 including an articulating inner frame 21 made up of stent posts 22 and articulating segments 24 connected by hinge pins 25. The collapsible valve 20 also has a number of projections 26 that are used to collapse the valve 20. In order to collapse the valve 20, a valve collapsing catheter 30 is inserted and used to grab the projections 26. (See column 13, line 66 – column 14, line 13 and Figures 3B, 3C and 6A-6C).

In the rejection, the articulating inner frame 21 is relied upon as corresponding to the claimed resilient carrier frame. However, it is clear that Vesely fails to provide any disclosure or suggestion that the articulating inner frame 21 comprises a resilient wire mesh. Instead, the inner frame 21 is explicitly disclosed as being made up of the articulating segments 24 connected by the hinge pins 25. Further, there is absolutely no disclosure or suggestion in Vesely of integrated centripetal compression means comprising a constriction strand permanently engaged around the resilient wire mesh, the resilient wire mesh being a resilient tubular wire mesh, or the constriction strand extending around a circumference of the resilient tubular wire mesh. As a result, Vesely fails to disclose or suggest any of these features as recited in claim 18.

As for Garrison, Fogarty and Johnson it is apparent that these references also fail to disclose or suggest the above-discussed features of claim 18.

Because of the above-mentioned distinctions, it is believed clear that claims 1-4 and 6-18 are allowable over the references relied upon in the rejections. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 1-4 and 6-18. Therefore, it is submitted that claims 1-4 and 6-18 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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